

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An organic electroluminescent device comprising in the following order:

a first electrode;

a light emitting layer; and

a second electrode,

said light emitting layer containing two or more different luminescent materials, and at least one of said two or more different luminescent materials being a phosphorescent material, wherein

said at least one phosphorescent material includes a Tris (~~2-phenylquinoline~~) (2-phenylquinoline) iridium, a derivative of said Tris (2-phenylquinoline) iridium or an iridium complex,

said light emitting layer comprises a short wavelength light emitting layer and a long wavelength light emitting layer,

at least one of the peak wavelengths of light emitted by said short wavelength light emitting layer being in a range of 430 nm to 520 nm, and at least one of the peak wavelengths of light emitted by said long wavelength light emitting layer being in a range of 520 nm to 630 nm,

said long wavelength light emitting layer includes a first host material and a first phosphorescent material,

said first electrode is an anode, and said second electrode is a cathode,

said long wavelength light emitting layer and said short wavelength light emitting layer are formed in this order between said anode and said cathode, and

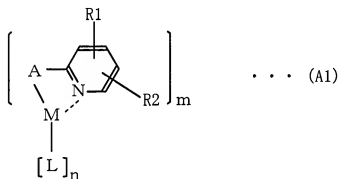
said long wavelength light emitting layer further contains a first assisting dopant having a hole transport capability.

Claims 2-3 (Cancelled)

4. (Currently Amended) The organic electroluminescent device according to claim [[3]] 1, wherein

said first phosphorescent material has a molecular structure expressed by the following formula (A1), and

in the formula (A1), A is a substituent, R1 and R2 are the same or different from each other, and are each a hydrogen atom, a halogen atom, or a substituent, L is a substituent, M is a heavy metal, m is 1, 2, or 3, and m and n satisfy a relationship of  $2m + 2n = 6$  or  $2m + n = 6$

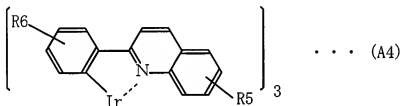


Claims 5-6 (Cancelled)

7. (Previously Presented) The organic electroluminescent device according to claim 4, wherein

said first phosphorescent material has a Tris(2-phenylquinoline)iridium skeleton having a molecular structure expressed by the following formula (A4), and

R5 and R6 in the formula (A4) are the same or different from each other, and are each a hydrogen atom, a halogen atom, or a substituent



8. (Cancelled)

9. (Currently Amended) The organic electroluminescent device according to claim [[8]] 1, wherein

the volume ratio of the sum of said first phosphorescent material and said first assisting dopant to said long wavelength light emitting layer is 3 to 40 %.

10. (Currently Amended) The organic electroluminescent device according to claim [[8]] 1, wherein

the energy level H6 of the highest occupied molecular orbit of said first host material, the energy level H4 of the highest occupied molecular orbit of said first phosphorescent material,

and the energy level H5 of the highest occupied molecular orbit of said first assisting dopant satisfy relationships given by the following expressions (5) to (7)

$$H4 < H5 < H6 \quad \dots (5)$$

$$|H6 - H5| < 0.4 \text{ eV} \quad \dots (6)$$

$$|H5 - H4| < 0.4 \text{ eV} \quad \dots (7).$$

11. (Currently Amended) The organic electroluminescent device according to claim [[8]] 1, wherein

said first assisting dopant is composed of an amine-based material, an anthracene derivative, or an iridium complex.

12. (Currently Amended) The organic electroluminescent device according to claim [[3]] 1, wherein

the ratio of the maximum peak luminous intensity of the light emitted by said long wavelength light emitting layer to the maximum peak luminous intensity of the light emitted by said short wavelength light emitting layer is 100 : 20 to 100 : 100.

13. (Currently Amended) ~~The organic electroluminescent device according to claim 3~~  
wherein, An organic electroluminescent device comprising in the following order:

a first electrode;

a light emitting layer; and

a second electrode.

said light emitting layer containing two or more different luminescent materials, and at least one of said two or more different luminescent materials being a phosphorescent material, wherein

said at least one phosphorescent material includes a Tris (2-phenylquinoline) iridium, a derivative of said Tris (2-phenylquinoline) iridium or an iridium complex,

said light emitting layer comprises a short wavelength light emitting layer and a long wavelength light emitting layer,

at least one of the peak wavelengths of light emitted by said short wavelength light emitting layer being in a range of 430 nm to 520 nm, and at least one of the peak wavelengths of light emitted by said long wavelength light emitting layer being in a range of 520 nm to 630 nm,

said long wavelength light emitting layer includes a first host material and a first phosphorescent material,

said first electrode is an anode, and said second electrode is a cathode,

said long wavelength light emitting layer and said short wavelength light emitting layer are formed in this order between said anode and said cathode,

said short wavelength light emitting layer further contains a second host material and an assisting dopant, and

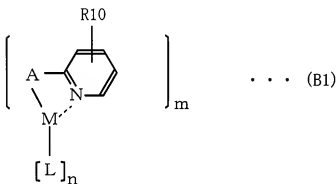
said assisting dopant is composed of the same material as said first host material.

14. (Original) The organic electroluminescent device according to claim 13, wherein said short wavelength light emitting layer contains a second phosphorescent material.
15. (Cancelled)

16. (Currently Amended) The organic electroluminescent device according to claim [[15]]  
18, wherein

said second phosphorescent material has a molecular structure expressed by the following  
formula (B1), and

in the formula (B1), A is a substituent, R10 is a hydrogen atom, a halogen atom, or a  
substituent, L is a substituent, M is a metal, m is 1, 2, or 3, and m and n satisfy a relationship of  
 $2m + 2n = 6$  or  $2m + n = 6$



17. (Cancelled)

18. (Currently Amended) ~~The organic electroluminescent device according to claim 15,~~  
~~wherein~~ An organic electroluminescent device comprising in the following order:

a first electrode;

a light emitting layer; and

a second electrode.

said light emitting layer containing two or more different luminescent materials, and at least one of said two or more different luminescent materials being a phosphorescent material, wherein

said at least one phosphorescent material includes a Tris (2-phenylquinoline) iridium, a derivative of said Tris (2-phenylquinoline) iridium or an iridium complex,

said light emitting layer comprises a short wavelength light emitting layer and a long wavelength light emitting layer,

at least one of the peak wavelengths of light emitted by said short wavelength light emitting layer being in a range of 430 nm to 520 nm, and at least one of the peak wavelengths of light emitted by said long wavelength light emitting layer being in a range of 520 nm to 630 nm,

said long wavelength light emitting layer includes a first host material and a first phosphorescent material,

said short wavelength light emitting layer contains a second host material and a second phosphorescent material,

said first electrode is an anode, and said second electrode is a cathode,

said short wavelength light emitting layer and said long wavelength light emitting layer are formed in this order between said anode and said cathode, and

said short wavelength light emitting layer further contains an assisting dopant having a hole transport capability.

19. (Previously Presented) The organic electroluminescent device according to claim 18, wherein

the volume ratio of the sum of said second phosphorescent material and said assisting dopant to said short wavelength light emitting layer is 3 to 40 %.

20. (Previously Presented) The organic electroluminescent device according to claim 18, wherein

the energy level H3 of the highest occupied molecular orbit of said second host material, the energy level H1 of the highest occupied molecular orbit of said second phosphorescent material, and the energy level H2 of the highest occupied molecular orbit of the assisting dopant satisfy a relationship given by the following expression (9)

$$H1 < H2 < H3 \quad \dots (9).$$

21. (Previously Presented) The organic electroluminescent device according to claim 18, wherein

said assisting dopant is composed of an amine-based material, an anthracene derivative, or an iridium complex.

22. (Currently Amended) The organic electroluminescent device according to claim [[15]] 18, wherein

the ratio of the maximum peak luminous intensity of the light emitted by said short wavelength light emitting layer to the maximum peak luminous intensity of the light emitted by said long wavelength light emitting layer is 100 : 20 to 100 : 100.

23. (Currently Amended) ~~The organic electroluminescent device according to claim 15,~~  
~~wherein~~ An organic electroluminescent device comprising in the following order:

a first electrode;

a light emitting layer; and



a second electrode,

said light emitting layer containing two or more different luminescent materials, and at least one of said two or more different luminescent materials being a phosphorescent material, wherein

said at least one phosphorescent material includes a Tris (2-phenylquinoline) iridium, a derivative of said Tris (2-phenylquinoline) iridium or an iridium complex,

said light emitting layer comprises a short wavelength light emitting layer and a long wavelength light emitting layer,

at least one of the peak wavelengths of light emitted by said short wavelength light emitting layer being in a range of 430 nm to 520 nm, and at least one of the peak wavelengths of light emitted by said long wavelength light emitting layer being in a range of 520 nm to 630 nm,

said long wavelength light emitting layer includes a first host material and a first phosphorescent material,

said short wavelength light emitting layer contains a second host material and a second phosphorescent material,

said first electrode is an anode, and said second electrode is a cathode,

said short wavelength light emitting layer and said long wavelength light emitting layer are formed in this order between said anode and said cathode,

said short wavelength light emitting layer further contains an assisting dopant, and

said assisting dopant being composed of the same material as said first host material.

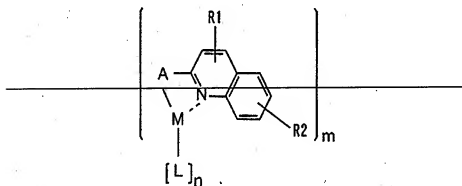
24. (Currently Amended) The organic electroluminescent device according to claim [[2]] 1, wherein

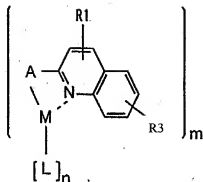
said long wavelength light emitting layer contains a first host material and a first phosphorescent material,

said short wavelength light emitting layer contains a second host material, a second phosphorescent material, and an assisting dopant, and

said assisting dopant is composed of the same material as said first host material.

25. (Currently Amended) The organic electroluminescent device according to claim 4, wherein said first phosphorescent material has a molecular structure expressed by the following formula:

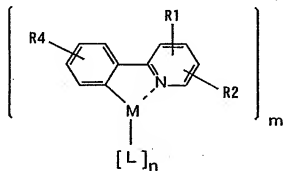




said R1 is a hydrogen atom, and

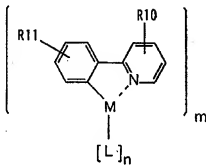
R3 in the formula is a hydrogen atom, a halogen atom, or a substituent.

26. (Currently Amended) The organic electroluminescent device according to claim 4, wherein said first phosphorescent material has a molecular structure expressed by the following formula:



and said R4 is a hydrogen atom, a halogen atom, or a substituent.

27. (Currently Amended) The organic electroluminescent device according to claim 16, wherein said second phosphorescent material has a molecular structure expressed by the following formula:



and said  $R_{11}$  is a hydrogen atom, a halogen atom, or a substituent.